

~~U.S.S.N. 10,769,245~~

Claim Amendments

Please amend claims 1-3, 5, 11-13, 15, and 16 as follows:

Please cancel claims 4, 6, 7, 9, 10, 14, and 17-20 as follows:

Please add new claims 21 - 30 as follows:

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Claims as Amended

1. (currently amended) A method of cleaning a wafer surface, comprising the steps of:

providing a wafer surface comprising at least one of a metal and a dielectric layer;

providing a surfactant composition solution;


subjecting said wafer surface to a plurality of polishing steps;

applying said surfactant composition solution to said wafer surface after at least one of said plurality of polishing steps to render said wafer surface hydrophilic; and

then rinsing said wafer surface.

2. (currently amended) The method of claim 1 wherein said applying said surfactant composition solution to ~~said~~ wafer comprises applying said surfactant composition to ~~said~~ wafer

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after completion of said plurality of polishing steps.

3. (currently amended) The method of claim 1 wherein said surfactant composition solution comprises an aqueous alcohol solution.

4. cancelled

5. (currently amended) The method of claim 1 wherein said rinsing said wafer surface comprises providing deionized water and rinsing said wafer using said deionized water.

6. cancelled

7. cancelled

8. (original) The method of claim 3 wherein said aqueous alcohol solution comprises from about 0.01% to about 1% alcohol by volume.

9. cancelled

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10. cancelled

11. (currently amended) The method of claim [[8]] 3 wherein said alcohol comprises octanol.

12. (currently amended) The method of claim [[8]] 3 further comprising ethylene oxide in said aqueous alcohol solution.

13. (currently amended) A method of cleaning a hydrophobic wafer surface, comprising the steps of:

providing a wafer surface comprising at least one of a metal and a dielectric layer;

providing a surfactant composition solution comprising an aqueous alcohol solution;

subjecting said wafer surface to a plurality of polishing steps;

applying said surfactant composition solution to said wafer surface after each of said plurality of polishing steps to

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form a hydrophilic surface; and

rinsing said wafer surface with water.

14. cancelled

15. (currently amended) The method of claim 13 ~~[[14]]~~ wherein said ~~aqueous--alcohol--solution~~ surfactant composition solution comprises from about 0.01% to about 1% alcohol by volume.

16. (currently amended) The method of claim ~~[[15]]~~ 13 further comprising ethylene oxide in said ~~aqueous--alcohol--solution~~ surfactant composition solution.

Claims 17- 20 cancelled

21. (new) The method of claim 1, wherein the steps of applying said surfactant composition solution and rinsing are carried out after each of said plurality of polishing steps.

22. (new) The method of claim 1, wherein said plurality of polishing steps comprises a copper polishing step.

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23. (new) The method of claim 1, said plurality of polishing steps comprises an oxide polishing step.

24. (new) The method of claim 1, wherein said plurality of polishing steps comprises a low-K oxide polishing step.

25. (new) The method of claim 1, wherein said plurality of polishing steps comprises a metal nitride polishing step.

26. (new) The method of claim 1, wherein said surfactant composition solution comprises an alcohol having the formula $C_nH_{2n-1}OH$, where n is any one of the integers 4-12.

27. (new) The method of claim 13, wherein said plurality of polishing steps comprises a copper polishing step.

28. (new) The method of claim 13, said plurality of polishing steps comprises an oxide polishing step.

29. (new) The method of claim 13, wherein said plurality of polishing steps comprises a low-K oxide polishing step.

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30. (new) The method of claim 13, wherein said plurality of polishing steps comprises a metal nitride polishing step.